NC/QC/YD/2020-21/W4-C1 **Date: 21-12-2020**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**156 min**	Shall not be less than 30 min
2	Final setting time	**265min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.15%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.09mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.74 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-PCC1 **Date: 21-12-2020**

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	100.00	85-100	90 – 100
20mm	63.15	0 -20	30- 70
10mm	29.40	0 -5	10- 35
4.75mm	3.90	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	98.70	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	85.25	60-95	75-100	85-100	
01.18	73.05	30-70	55-90	75-100	
600.mic	46.45	15-34	35-59	60-79	
300.mic	22.15	5-20	8-30	12-40	
150.mic	6.80	0-10	0-10	0-10	

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಶಾಖಾಯ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

Page No. 1/1,

NEWZEN CONSULTANT * Bangalore * NEWZEN CONSULTANT

NC/QC/YD/2020-21/W4-K1 **Date: 23-12-2020**

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb Stones.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

1. PHYSICAL TESTS ON KERB STONES :

Sl No.	Identification	Flexural strength, fcr in N/sqmm	Characteristic Compressive Strength, fck in N/sqmm	Avg. Characteristic. Compressive Strength fck in N/sqmm	Remarks
1	001	3.35	22.95	**22.83**	As per Cl. 6.2.2 of IS 456-2000, fcr=0.7√ fck
2	002	3.29	22.10		
3	003	3.39	23.45		

2. WATER ABSORPTION TEST

Sl No	Identification	Water absorption %	Average value %
1	001	4.49	**4.49**
2	002	4.38	
3	003	4.61	

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ, ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore * NEWZEN CONSULTANT

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA, JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-G1 Date: 04-01-2021

TEST REPORT ON GRANULAR SUBBASE MIX
(GRADATION TEST)

Sub: To conduct tests on GSB (Grade-V) mix.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

1. **Gradation Test:**
TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
26.50	96.25	70-100
9.50	72.80	50-80
4.75	54.45	40-65
2.36	44.90	30-50
0.425	12.05	10-15
0.075	3.70	<5

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-W1 **Date: 06-01-2021**

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	96.15	95-100
26.50	—	-
22.40	74.50	60-80
11.20	52.15	40-60
4.75	34.65	25-40
2.36	26.70	15-30
0.600	19.35	8-22
0.075	3.85	0-5

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-W2 **Date: 08-01-2021**

TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	96.35	95-100
26.50	---	-
22.40	71.15	60-80
11.20	54.10	40-60
4.75	32.45	25-40
2.36	24.05	15-30
0.600	18.05	8-22
0.075	3.20	0-5

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬ.ಮ.ನ.ಪಿ, ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

Date: 11-01-2021

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.84%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.32 %**	Not more than 35.0 %
3.	Water absorption, %	**0.42 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

NEWZEN CONSULTANT * Bangalore * NEWZEN CONSULTANT

ಸಹಾಯಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

Date: 12-01-2021

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS 383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**27.56%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.74%**	Not more than 35.0 %
3.	Water absorption, %	**0.42 %**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, Temple road

NEWZEN CONSULTANT * Bangalore *

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-BD1 **Date: 16-01-2021**

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.
Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**52.70^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**108.90 cm**	40
3.	Flash point	**245^0 C**	Minimum 220^0 C
4.	Softening point	**51.40^0 C**	Min. 47

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಜಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-DBM1 **Date: 18-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.52 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	**100**	100
26.5	**96.25**	90-100
19.0	**82.15**	71-95
13.20	**76.40**	56-80
4.75	**43.70**	38-54
2.36	**36.05**	28-42
0.300	**18.90**	7-21
0.075	**6.40**	2-8

The result of the materials tested meets the standards and hence can be used for the work.

Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಪ.ಪಂ.ಪ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT Bangalore

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-DBM2 **Date: 18-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.53 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	100	100
26.5	97.45	90-100
19.0	82.15	71-95
13.20	74.60	56-80
4.75	42.10	38-54
2.36	36.80	28-42
0.300	17.25	7-21
0.075	7.15	2-8

The result of the materials tested meets the standards and hence can be used for the work.

Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
JNANABHARATHI, BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187
EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/W4-DS3 **Date: 20-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :

(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.

{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1256**	900
2	Marshall Flow at 60°C, mm.	**3.24**	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

Page No. 1/1

NEWZEN CONSULTANT ★ Bangalore ★ NEWZEN CONSULTANT

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬ ಮ.ನ.ಪ. ಬೆಂಗಳೂರು-106

NC/QC/YD/2020-21/W4-DS4 **Date: 20-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1262**	900
2	Marshall Flow at 60°C, mm.	**3.46**	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, Temple road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬ.ಬ.ಪಾ.ಪ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/W4-BB1 **Date: 16-01-2021**

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.

{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**51.60^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**109.0 cm**	40
3.	Flash point	**236^0 C**	Minimum 220^0 C
4.	Softening point	**50.10^0 C**	Min. 47

. The result of the materials tested meets the standards and hence can be used for the work.

Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/W4-BS1 **Date: 21-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1368**	900
2	Marshall Flow at 60°C, mm.	**3.45**	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ
ಬ ಬ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/W4-BC2 **Date: 20-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	97.65	90-100
9.5	84.15	70-88
4.75	73.50	53-71
2.36	51.20	42-58
1.18	35.35	34-48
0.600	29.80	26-38
0.300	22.60	18-28
0.150	18.25	12-20
0.075	5.60	4-10

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

NEWZEN CONSULTANT * Bangalore * NEWZEN CONSULT

NEWZEN CONSULTANT BANGALORE, #13,10TH MAIN ROAD 2ND CROSS JNANAJYOTHI NAGARA,
BANGALORE-560056. CELL NO: +91 8792620231, 080 23240187

NEWZEN CONSULTANTS BANGALORE

NEW TECHNOLOGIES TO INNOVATE

NC/QC/YD/2020-21/W4-BC3 **Date: 20-01-2021**

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project*: Improvements to roads and Drains at Allalsandra village in ward no-04 of Yelahanka Satellite Town Sub Division.}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: Sri Rajanna N, Bangalore.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42 %**

2. **Gradation Test**

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	96.25	90-100
9.5	82.10	70-88
4.75	75.50	53-71
2.36	53.15	42-58
1.18	48.35	34-48
0.600	34.75	26-38
0.300	22.60	18-28
0.150	19.25	12-20
0.075	8.15	4-10

. The result of the materials tested meets the standards and hence can be used for the work.

Sample Collected Site : Allalsandra, 1st main road

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ,
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-106

Page No. 1/1

NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/W2-SS-C1 **Date: 24-12-2020**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads and Drains at SC/ST areas in ward no-02 of Yelahanka Sub Division.}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: Sri Ramesh. Y.B, Bangalore.

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**159 min**	Shall not be less than 30 min
2	Final setting time	**262 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.96 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.01mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	**28.94 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.
Sample Collected Site : Kenchenahalli main road

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರ
ಯಲಹಂಕ ಉಪನಗರ ಉಪವಿಭಾಗ.
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

Page No. 1/1,

NEWZEN CONSULTANT * Bangalore *